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1983 ALBERTA HOUSE COST COMPARISON STUDY

Executive Summary

Single Detached Dwelling

24 Unit Walk-up Apartment

Alberta
DEPARTMENT OF HOUSING

84- 3000 /

1983 ALBERTA HOUSE COST COMPARISON STUDY

EXECUTIVE SUMMARY

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A) Reduced Drawings Single-Detached Dwelling
B) Reduced Drawings Walk-up Apartment
C) Changes from 1982 Study

PREFACE

The main purpose of the 1983 Alberta House Cost Comparison Study is to provide cost estimates of the 1983 hard construction costs of a prototypical single-detached dwelling and a 24 unit walk-up apartment in eight urban centres in this Province.

The study also compares 1983 residential construction costs of the single-detached dwelling and the apartment with those of previous years in each of the eight urban centres. Most emphasis is given to a comparison of 1983 and 1982 costs and the study includes an analysis of these differences.

The Alberta Department of Housing has commissioned similar studies for the past six years. The 1983 study has been carried out by Hanscomb Consultants Inc. and has been documented in three reports:

1983 Alberta House Cost Comparison Study: Executive Summary
1983 Alberta House Cost Comparison Study: Single-Detached Dwelling
1983 Alberta House Cost Comparison Study: Walk-Up Apartment

Additional copies of any of these reports can be ordered from:

ALBERTA DEPARTMENT OF HOUSING
Planning and Research Branch
10050 - 112 Street
Edmonton, Alberta
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1.0 INTRODUCTION

1.0 INTRODUCTION

1.1 Objectives

The objectives of the 1983 Alberta House Cost Comparison Study are as follows:

1. To determine 1983 residential construction costs in selected urban centers in Alberta.
2. To determine reasons for differences in residential construction costs in the selected centers.
3. To compare 1983 residential construction costs with those of previous years.

1.2 Scope of Work

The 1983 Alberta House Cost Comparison Study examines the construction costs of a typical single-detached dwelling and a twenty-four unit walk-up apartment building.

The study has been documented in three reports: an Executive Summary, a report on a typical single-detached dwelling and a report on a walk-up apartment. This report is the Executive Summary.

The study examines building construction costs in the following centers:

1. Edmonton
2. Calgary
3. Red Deer
4. Fort McMurray
5. Grande Prairie
6. Hinton
7. Lethbridge
8. Medicine Hat

1.0 INTRODUCTION

1.2 Scope of Work (cont'd)

The cost analysis for both the single detached dwelling and the walk-up apartment block examines the building construction cost differences between each of the centers and highlights the reasons for those differences with reference to such factors as:

a) material costs,
b) labour costs, and
c) building features and inclusions.

The cost estimates of the single-detached dwelling for each center includes all structural, finishing, mechanical and electrical work shown on the drawings and included in the specifications and site overhead. The estimate excludes the following items:

a) cost of land and site clearance,
b) site servicing costs,
c) site development costs,
d) design fees and expenses,
e) legal fees and expenses,
f) marketing and real estate financing costs, and
g) contractor's overhead and profit.

1.0 INTRODUCTION

1.2 Scope of Work (cont'd)

The cost estimates of the walk-up apartment block for each center includes all structural, finishing, mechanical and electrical work shown on the drawings and included in the specifications, site overhead and contractor's overhead and profit. The estimate excludes the following items:

a) cost of land and site clearance,
b) site servicing costs,
c) site development costs,
d) design fees and expenses,
e) legal fees and expenses, and
f) marketing and real estate financing costs.

1.3 Approach

The building construction costs are examined in the report under the headings of labour and material/equipment costs. Labour rates used in the report are either those established by the trade union concerned or by the market where trade union rates do not apply. In most cases a realistic assessment of labour rates has been established by examining the circumstances of the particular sub-trade within the building industry. Material prices have been evaluated from building materials suppliers lists. Average discounts are applied in order to establish a realistic market price for the materials to contractors.

1.0 INTRODUCTION

1.3 Approach (cont'd)

The cost data is assembled in trade format and presented in 22 trade categories for the single-detached dwelling and 25 trade categories for the walk-up apartment. The sub-trade operations are combined within each trade category in order to reflect current estimating practice within the industry. Site overhead and general contractor's office overhead and profit are shown separately for the walk-up apartment to indicate the actual site costs.

A computer program was developed in order to collate and present the cost data which were assembled in the eight centers. The quantities and trade descriptions were initially established for the prototypical house and apartment block. The cost data applicable to the relevant quantities and trade descriptions for each center were then processed through the computer.

The cost effects of market forces and building industry conditions are addressed in the Findings section of the report.

1.4 Findings

Several factors have influenced the residential building market during 1983. The most significant factor influencing the present market condition has been the downturn in the economy, which has curtailed the number of people immigrating to the Province and reduced construction activity in residential as well as institutional and commercial sectors.

1.0 INTRODUCTION

1.4 Findings (cont'd)

Cost comparisons between 1983 and 1982 indicate the continuing reduction in labour and material costs from 1982. The decrease in labour costs is thought to be mainly due to the surplus supply of labour and the material cost has decreased due to high discount rates offered by suppliers and manufacturers to reduce their inventories.

In all centers surveyed for this study, residential construction costs have generally decreased significantly in 1983 except for Grande Prairie, where only a marginal decrease occurred. Material prices show a slightly smaller decrease than labour prices in all centers except Grande Prairie, where they have remained at the 1982 level. Single-detached dwelling cost decreases varied from a marginal decrease of 0.9% in Grande Prairie to 8.6% in Red Deer. Cost trends for the walk-up apartment indicate a more substantial reduction since 1982 with decreases ranging from 4.4% to 12.2%.

The graphic presentation of construction costs in Tables SD.7 (Comparative Total Building Cost Graphs 1979-1983 for the single-detached dwelling) and WA.8 (Comparative Total Building Cost Graphs 1980-1983 for the walk-up apartment) highlight the downward trend of construction costs. Measured in nominal dollars, apartment costs have dropped substantially to levels below 1980 costs, and single-detached dwelling costs are close to 1980 costs.

1.4 Findings (cont'd)

The average cost per square foot for the single-detached dwelling is $35.83, which is lower than the 1980 average of $ 36.22 by 1%. The average cost per square foot for the walk-up apartment is $32.24, which is lower than the 1980 average of $35.48 by 9%.

In the past appliances have been included in the cost of single-detached dwellings but they are currently included in only 10 to 20% of the new homes. To facilitate comparison with 1982 costs, the 1983 single-detached dwelling costs include an allowance for appliances. An amount of $945.00 has been allowed for a range and a refrigerator which amounts to $9.45/$m^2$ or $0.88/square foot.

2.0 SUMMARY OF FINDINGS FOR THE SINGLE-DETACHED DWELLING

2.0 SUMMARY OF FINDINGS FOR THE SINGLE-DETACHED DWELLING

TABLE SD.1: Total Building Costs

Item	Edmonton		Calgary		Red Deer		Fort McMurray		Grande Prairie		Hinton		Lethbridge		Medicine Hat	
Element	Total $	%	Total $	%	Total $	%	Total $	%	Total $	%	Total $	%	Total $	%	Total $	%
Labour	9,812	27.5	9,559	27.4	10,290	27.9	12,528	29.1	10,750	26.6	11,557	29.1	11,177	29.1	11,907	30.3
Material*	25,911	72.5	25,394	72.6	26,651	72.1	30,493	70.9	29,699	73.4	28,119	70.9	27,250	70.9	27,419	69.7
Total 1983*	35,723	100	34,953	100	36,941	100	43,021	100	40,449	100	39,676	100	38,427	100	39,326	100
Cost per m2	$ 357.23		$ 349.53		$ 369.41		$ 430.21		$ 404.49		$ 396.76		$ 384.27		$ 393.26	
Cost per SF	$ 33.19		$ 32.47		$ 34.32		$ 39.97		$ 37.58		$ 36.86		$ 35.70		$ 36.53	
Total 1982	$ 37,732		$ 36,894		$ 40,432		$ 46,257		$ 40,814		$ 42,453		$ 41,546		$ 42,102	
Change from 1982	- 5.3%		- 5.3%		- 8.6%		- 7.0%		- 0.9%		- 6.5%		- 7.5%		- 6.6%	

NOTES: *Materials cost includes $945.00 ($9.45/m2 $0.88/SF) for appliances (fridge and stove).

2.0 SUMMARY OF FINDINGS FOR THE SINGLE-DETACHED DWELLING

TABLE SD.2: Comparative Cost Ratios

Location	Edmonton	Calgary	Red Deer	Fort McMurray	Grande Prairie	Hinton	Lethbridge	Medicine Hat
Edmonton	1.00	0.98	1.03	1.20	1.13	1.11	1.08	1.10
Calgary	1.02	1.00	1.06	1.23	1.16	1.14	1.10	1.13
Red Deer	0.97	0.95	1.00	1.16	1.09	1.07	1.04	1.06
Fort McMurray	0.83	0.81	0.86	1.00	0.94	0.92	0.89	0.91
Grande Prairie	0.88	0.86	0.91	1.06	1.00	0.98	0.95	0.97
Hinton	0.90	0.88	0.93	1.08	1.02	1.00	0.97	0.99
Lethbridge	0.93	0.91	0.96	1.12	1.05	1.03	1.00	1.02
Medicine Hat	0.91	0.89	0.94	1.09	1.03	1.01	0.98	1.00

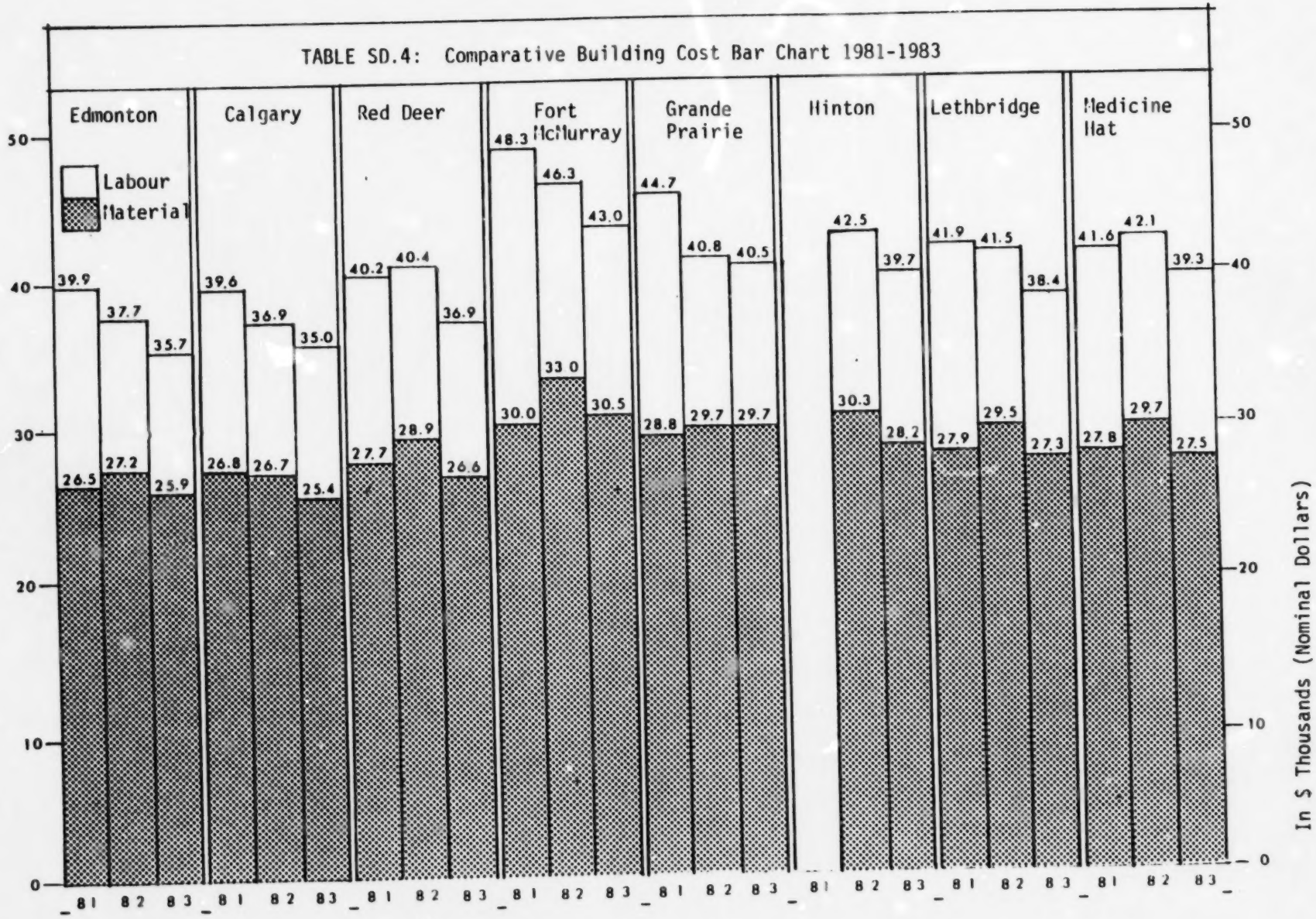
2.0 SUMMARY OF FINDINGS FOR THE SINGLE-DETACHED DWELLING

TABLE SD.3: Comparative Cost Table 1982-1983

Item	Edmonton	Calgary	Red Deer	Fort McMurray	Grande Prairie	Hinton	Lethbridge	Medicine Hat
Labour Cost								
1983	$ 9,812	$ 9,559	$ 10,290	$ 12,528	$ 10,750	$ 11,557	$ 11,177	$ 11,907
1982	$ 10,536	$ 10,331	$ 11,475	$ 13,232	$ 11,084	$ 12,152	$ 12,053	$ 12,401
Difference	$ - 724	$ - 772	$ - 1,185	$ - 704	$ - 334	$ - 595	$ - 876	$ - 494
$ Difference	- 6.8%	- 7.5%	- 10.3%	- 5.3%	- 3.0%	- 4.9%	- 7.3%	- 4.0%
Materials Cost								
1983*	$ 25.911	$ 25,394	$ 26,651	$ 30,493	$ 29,699	$ 28,119	$ 27,250	$ 27,419
1982*	$ 27,196	$ 26,563	$ 28,957	$ 33,025	$ 29,730	$ 30,301	$ 29,493	$ 29,701
Difference	$ - 1,285	$ - 1.169	$ - 2,306	$ - 2,532	$ - 31	$ - 2,182	$ - 2,243	$ - 2,282
$Difference	$ - 4.7%	$ - 4.4%	- 8.0%	- 7.7%	- 0.1%	- 7.2%	- 7.6%	- 7.7%
Total Cost								
1983	$ 35,723	$ 34,953	$ 36,941	$ 43,021	$ 40,449	$ 39,676	$ 38,427	$ 39,326
1982	$ 37,732	$ 36,894	$ 40,432	$ 46,257	$ 40,814	$ 42,453	$ 41,546	$ 42,102
Difference	$ - 2,009	$ - 1,941	$ - 3,491	$ - 3,236	$ - 365	$ - 2,777	$ - 3,119	$ - 2,776
Difference	- 5.3%	$ - 5.3%	- 8.6%	- 7.0%	- 0.9%	- 6.5%	- 7.5%	- 6.6%

NOTES: *Materials cost includes $ 945.00 ($9.45/m2 or $0.88/SF) for appliances (fridge and stove).

2.0 SUMMARY OF FINDINGS FOR THE SINGLE-DETACHED DWELLING



2.0 SUMMARY OF FINDINGS FOR THE SINGLE-DETACHED DWELLING

TABLE SD.5: Comparative Total Building Costs 1979 - 1983*

Year	Average 8 Centers	Edmonton	Calgary	Red Deer	Fort McMurray	Grande Prairie	Hinton**	Lethbridge	Medicine Hat
1979	$32,057	$29,545	$28,810	$31,431	$37,364	$34,348	-	$30,651	$32,249
1980	$38,991	$36,239	$34,964	$37,206	$45,747	$42,143	-	$38,055	$38,586
1981	$42,304	$39,925	$39,578	$40,159	$48,339	$44,655	-	$41,910	$41,561
1982	$41,029	$37,732	$36,894	$40,432	$46,257	$40,814	$42,453	$41,546	$42,102
1983***	$38,565	$35,723	$34,953	$36,941	$43,021	$40,449	$39,676	$38,427	$39,326

NOTES: * Expressed in nominal dollars.
** Hinton was not included in the 1979, 1980 and 1981 studies.
***Materials cost includes $ 945.00 ($9.45/m2 or $0.88/SF) for appliances (fridge and stove).

2.0 SUMMARY OF FINDINGS FOR THE SINGLE-DETACHED DWELLING

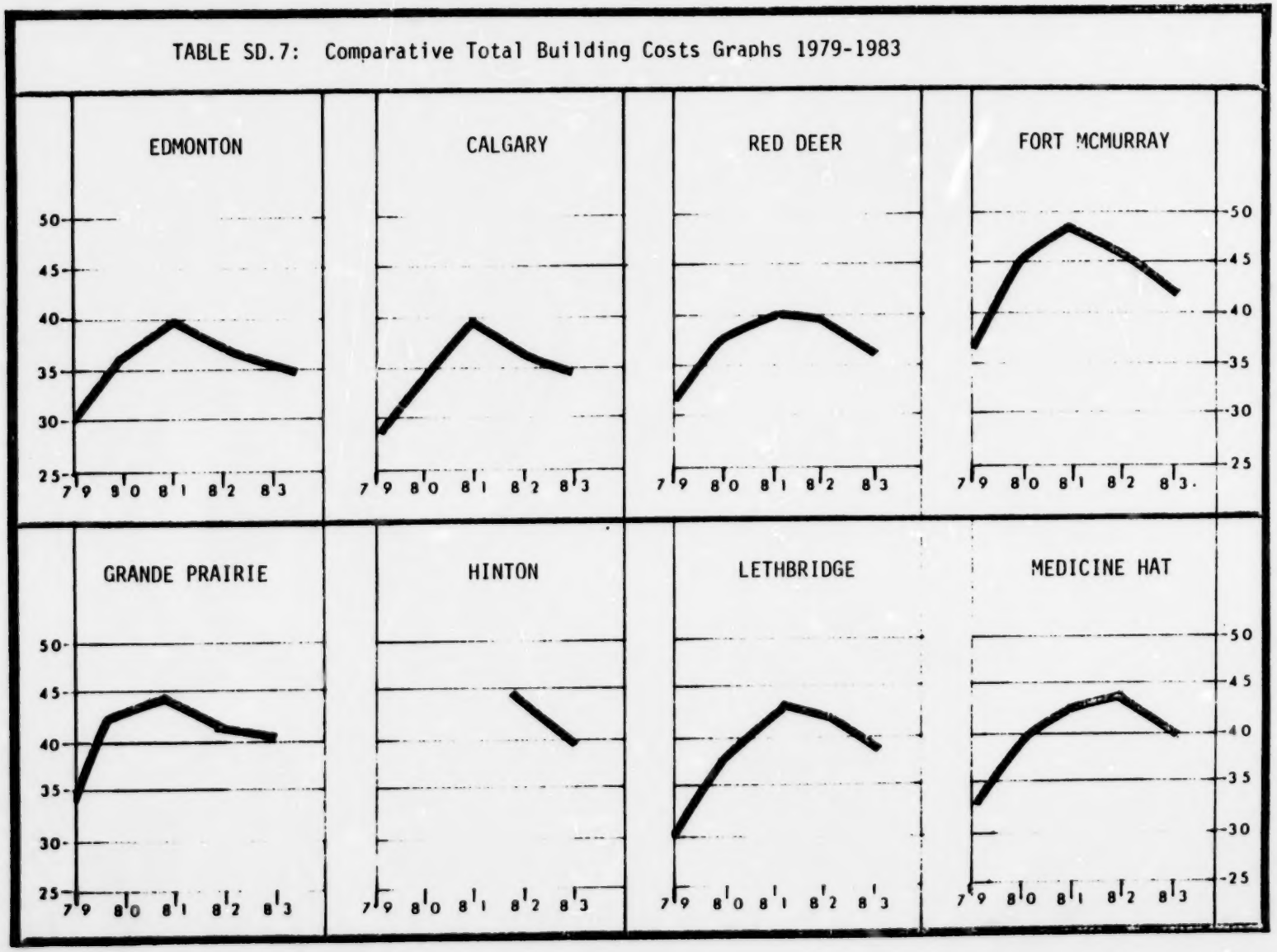
TABLE SD.6: Comparative Cost per Square Foot of Gross Floor Area*

Year	Average 8 Centers	Edmonton	Calgary	Red Deer	Fort McMurray	Grande Prairie	Hinton**	Lethbridge	Medicine Hat
1979	$ 29.78	$ 27.45	$ 26.74	$ 29.20	$ 34.71	$ 31.91	-	$ 28.47	$ 29.96
1980	$ 36.22	$ 33.66	$ 32.48	$ 34.56	$ 42.50	$ 39.15	-	$ 35.35	$ 35.85
1981	$ 39.30	$ 37.09	$ 36.77	$ 37.30	$ 44.91	$ 41.48	-	$ 38.93	$ 38.61
1982	$ 38.10	$ 35.05	$ 34.27	$ 37.56	$ 42.97	$ 37.82	$ 39.44	$ 38.60	$ 39.11
1983***	$ 35.83	$ 33.19	$ 32.47	$ 34.32	$ 39.97	$ 37.58	$ 36.86	$ 35.70	$ 36.53

NOTES: * Expressed in nominal dollars.
** Hinton was not included in the 1979, 1980 and 1981 studies.
***Materials cost includes $ 945.00 ($9.45/m2 or $0.88/SF) for appliances (fridge and stove).

2.0 SUMMARY OF FINDINGS FOR THE SINGLE-DETACHED DWELLING

TABLE SD.7: Comparative Total Building Costs Graphs 1979-1983



3.0 SUMMARY OF FINDINGS FOR THE SINGLE-DETACHED DWELLING

TABLE SD.8: Trade Division Cost Summaries

Location	Edmonton	Calgary	Red Deer	Fort McMurray	Grande Prairie	Hinton	Lethbridge	Medicine Hat
Divisions								
1. Excavation	791	826	880	1,134	927	871	1,038	887
2. Concrete	4,384	4,247	4,796	6,228	5,733	4,941	4,699	5,146
3. Damproofing	267	263	350	372	372	286	320	320
4. Siding	2,278	2,221	2,437	2,835	2,789	2,621	2,831	2,717
5. Roofing	795	795	806	884	884	852	866	869
6. Carpentry - Rough	6,112	6,162	5,897	7,418	6,664	6,406	6,554	6,833
7. Carpentry - Finish	625	629	616	676	646	709	977	988
8. Windows and Glazing	1,507	1,507	1,550	1,592	1,592	1,550	1,550	1,550
9. Sealants	55	55	55	55	55	55	55	55
10. Doors	944	868	944	1,076	1,076	1,064	974	921
11. Hardware	167	167	167	167	167	167	167	167
12. Ceramic Tiling	150	135	152	165	138	200	155	160
SUB TOTAL	18,075	17,875	18,650	22,602	21,043	19,722	20,186	20,613

3.0 SUMMARY OF FINDINGS FOR THE SINGLE-DETACHED DWELLING

TABLE SD.8: Trade Division Cost Summaries (cont'd)

Location	Edmonton	Calgary	Red Deer	Fort McMurray	Grande Prairie	Hinton	Lethbridge	Medicine Hat
Divisions								
13. Wallboard	3,333	3,127	3,486	4,385	3,976	3,753	3,532	3,706
14. Flooring	1,469	1,437	1,537	1,614	1,558	1,546	1,614	1,614
15. Painting	1,308	1,214	1,453	1,594	1,501	1,594	1,589	1,587
16. Fitting	2,179	2,025	2,249	2,365	2,310	2,300	2,295	2,295
17. Specialties	164	164	171	166	166	166	166	166
18. Appliances	1,045	1,045	1,045	1,045	1,045	1,045	1,045	1,045
19. Plumbing	2,250	2,100	2,200	2,450	2,350	2,550	2,100	2,100
20. Heating	1,400	1,466	1,450	1,800	1,800	1,800	1,400	1,500
21. Electrical	1,500	1,500	1,700	2,000	1,700	2,200	1,500	1,700
22. Site Overhead	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
TOTAL	35,723	34,953	36,941	43,021	40,449	39,676	38,427	39,326

3.0 SUMMARY OF FINDINGS FOR THE WALK-UP APARTMENT

3.0 SUMMARY OF FINDINGS FOR THE WALK-UP APARTMENT

TABLE WA.1: Total Building Costs

Item	Edmonton		Calgary		Red Deer		Fort McMurray		Grande Prairie		Hinton		Lethbridge		Medicine Hat	
Element	Total $	%	Total $	%	Total $	%	Total $	%	Total $	%	Total $	%	Total $	%	Total $	%
Labour	228,737	37.9	226,059	38.2	236,896	38.0	277,536	39.0	245,108	36.6	259,910	38.6	244,680	38.7	260,282	40.2
Material	374,309	62.1	366,115	61.8	386,956	62.0	434,726	61.0	424,466	63.4	414,136	61.4	388,192	61.3	387,563	59.8
Total 1983	603,046	100	592,174	100	623,852	100	712,262	100	669,574	100	674,046	100	632,872	100	647,845	100
Cost per m2	$ 324.74		$ 318.89		$ 335.95		$ 383.56		$ 360.57		$ 362.98		$ 340.80		$ 348.87	
Cost per SF	$ 30.17		$ 29.63		$ 31.21		$ 35.63		$ 33.50		$ 33.72		$ 31.66		$ 32.41	
Total 1983 per Apt.	$ 25,127		$ 24,674		$ 25,994		$ 29,678		$ 27,899		$ 28,085		$ 26,370		$ 26,994	
Total 1982	$ 665,273		$ 627,844		$ 710,485		$ 805,134		$ 700,436		$ 744,686		$ 720,280		$ 723,716	
Total 1982 per Apt.	$ 27,720		$ 26,160		$ 29,604		$ 33,547		$ 29,185		$ 31,029		$ 30,012		$ 30,155	
Change from 1982	-9.4%		-5.7%		-12.2%		-11.5%		-4.4%		-9.5%		-12.1%		-10.5%	

3.0 SUMMARY OF FINDINGS FOR THE WALK-UP APARTMENT

TABLE WA.2: Comparative Cost Ratios

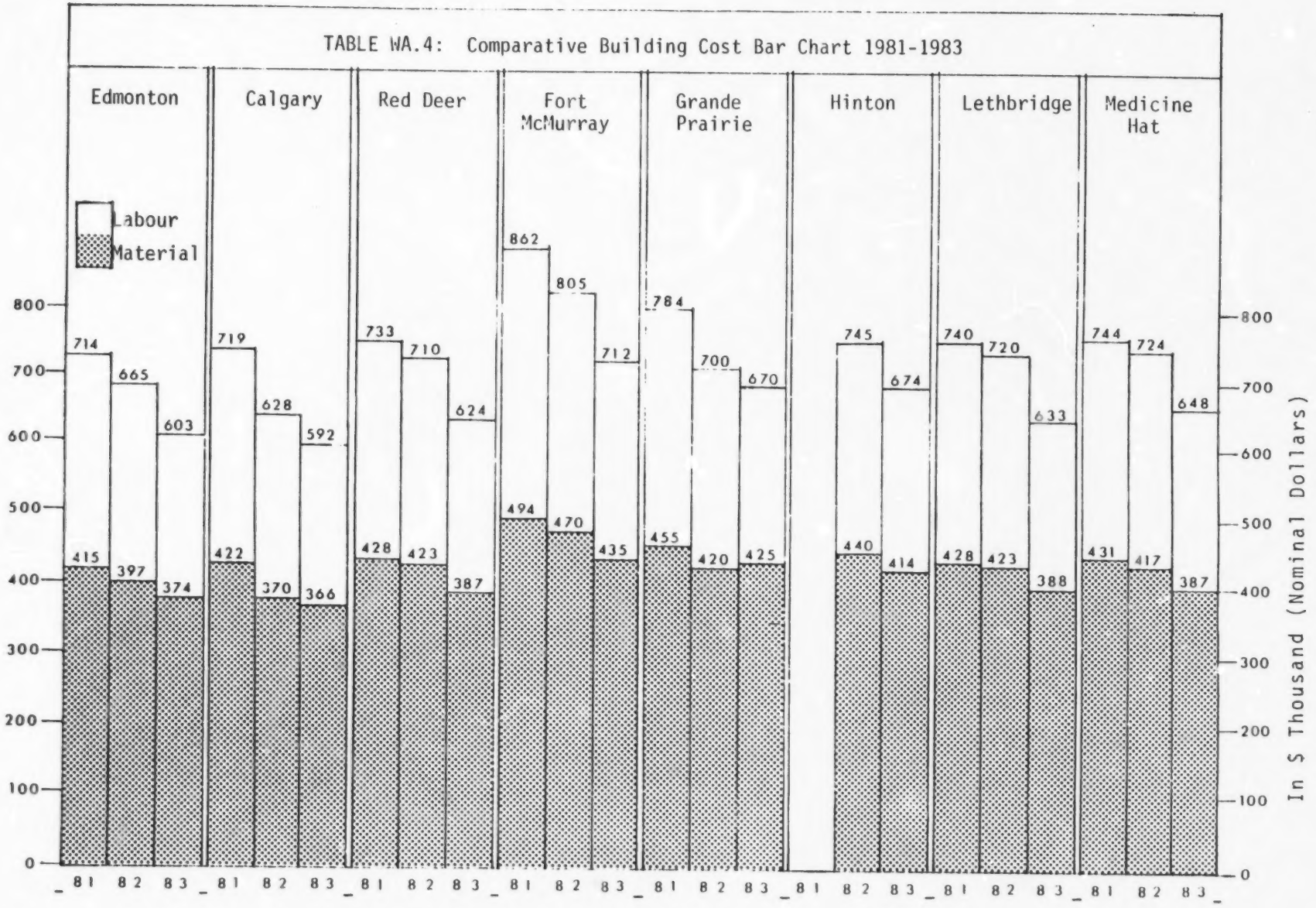
Location	Edmonton	Calgary	Red Deer	Fort McMurray	Grande Prairie	Hinton	Lethbridge	Medicine Hat
Edmonton	1.00	0.98	1.03	1.18	1.11	1.12	1.05	1.07
Calgary	1.02	1.00	1.05	1.20	1.13	1.14	1.07	1.09
Red Deer	0.97	0.95	1.00	1.14	1.07	1.08	1.01	1.04
Fort McMurray	0.85	0.83	0.88	1.00	0.94	0.95	0.89	0.91
Grande Prairie	0.90	0.88	0.93	1.06	1.00	1.01	0.95	0.97
Hinton	0.89	0.88	0.93	1.06	0.99	1.00	0.94	0.96
Lethbridge	0.95	0.94	0.99	1.13	1.06	1.07	1.00	1.02
Medicine Hat	0.93	0.91	0.96	1.10	1.03	1.04	0.98	1.00

3.0 SUMMARY OF FINDINGS FOR THE WALK-UP APARTMENT

TABLE WA.3: Comparative Cost Table 1982-1983

Item	Edmonton	Calgary	Red Deer	Fort McMurray	Grande Prairie	Hinton	Lethbridge	Medicine Hat
Labour								
1983 Cost	$ 228,737	$ 226,059	$ 236,896	$ 277,536	$ 245,108	$ 259,910	$ 244,680	$ 260,282
1982 Cost	$ 268,142	$ 257,490	$ 287,271	$ 335,453	$ 280,570	$ 304,687	$ 297,684	$ 306,440
Difference	$ -39,405	$ -31,431	$ -50,375	$ -57,917	$ -35,462	$ -44,777	$ -53,004	$ -46,158
% Difference	- 14.7%	- 12.2%	- 17.5%	- 17.3%	- 12.6%	- 14.7%	- 17.8%	- 15.1%
Materials								
1983 Cost	$ 374,309	$ 366,115	$ 386,956	$ 434,726	$ 424,466	$ 414,136	$ 388,192	$ 387,563
1982 Cost	$ 397,131	$ 370,354	$ 423,214	$ 469,681	$ 419,866	$ 439,999	$ 422,596	$ 417,276
Difference	$ -22,822	$ - 4,239	$ -36,258	$ -34,955	$ + 4,600	$ -25,863	$ -34,404	$ -29,713
%Difference	$ - 5.8%	$ - 1.1%	- 8.6%	- 7.4%	+ 1.1%	- 5.9%	- 8.1%	- 7.1%
Total								
1983 Cost	$ 603,046	$ 592,174	$ 623,852	$ 712,262	$ 669,574	$ 674,046	$ 632,872	$ 647,845
1982 Cost	$ 665,273	$ 627,844	$ 710,485	$ 805,134	$ 700,436	$ 744,686	$ 720,280	$ 723,716
Difference	$ -62,227	$ -35,670	$ -86,633	$ -92,872	$ -30,862	$ -70,640	$ -87,408	$ -75,871
%Difference	- 9.4%	$ - 5.7%	- 12.2%	- 11.5%	- 4.4%	- 9.5%	- 12.1%	- 10.5%

3.0 SUMMARY OF FINDINGS FOR THE WALK-UP APARTMENT



3.0 SUMMARY OF FINDINGS FOR THE WALK-UP APARTMENT

TABLE WA.5: Comparative Total Building Costs 1980 - 1983*

Year	Average 8 Centers	Edmonton	Calgary	Red Deer	Fort McMurray	Grande Prairie	Hinton**	Lethbridge	Medicine Hat
1980	$709,337	$660,295	$670,183	$685,282	$811,898	$736,435	-	$703,808	$697,459
1981	$756,703	$714,492	$719,003	$733,211	$861,728	$784,409	-	$740,084	$743,992
1982	$712,232	$665,273	$627,844	$710,485	$805,134	$700,436	$744,686	$720,280	$723,716
1983	$644,459	$603,046	$592,174	$623,852	$712,262	$669,574	$674,046	632,872	$647,845

NOTES: * Expressed in nominal dollars.
**Hinton was not included in the 1980 and 1981 studies.

3.0 SUMMARY OF FINDINGS FOR THE WALK-UP APARTMENT

TABLE WA.6: Comparative Cost per Square Foot of Gross Floor Area*

Year	Average 8 Centers	Edmonton	Calgary	Red Deer	Fort McMurray	Grande Prairie	Hinton**	Lethbridge	Medicine Hat
1980	$ 35.48	$ 33.04	$ 33.52	$ 34.28	$ 40.61	$ 36.84	-	$ 35.20	$ 34.89
1981	$ 37.86	$ 35.75	$ 35.97	$ 36.68	$ 43.11	$ 39.24	-	$ 37.03	$ 37.22
1982	$ 35.63	$ 33.28	$ 31.41	$ 35.54	$ 40.28	$ 35.04	$ 37.26	$ 36.03	$ 36.21
1983	$ 32.24	$ 30.17	$ 29.63	$ 31.21	$ 35.63	$ 33.50	$ 33.72	$ 31.66	$ 32.41

NOTES: * Expressed in nominal dollars.
**Hinton was not included in the 1980 and 1981 studies.

3.0 SUMMARY OF FINDINGS FOR THE WALK-UP APARTMENT

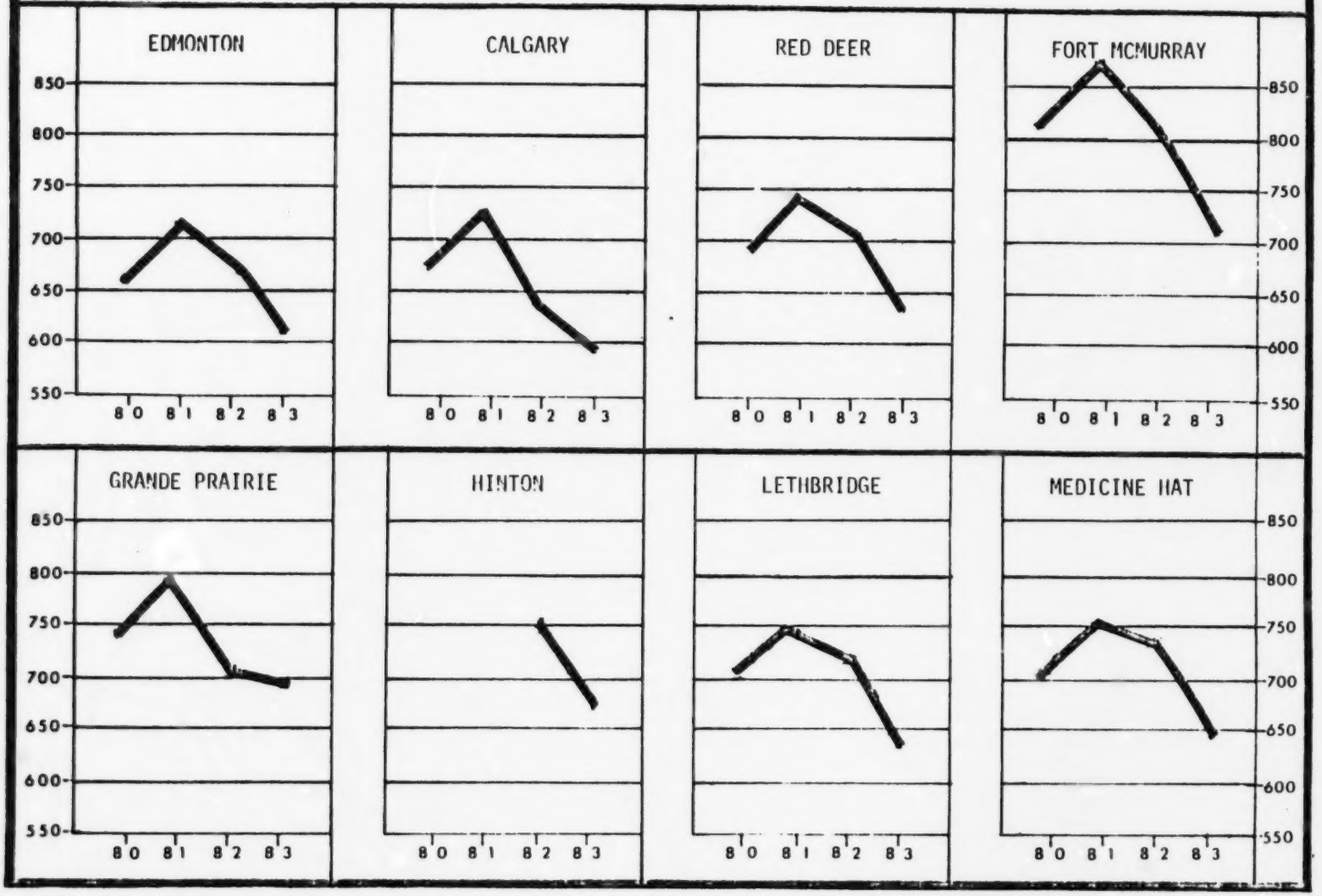
TABLE WA.7: Comparative Cost per Apartment Unit*

Year	Average 8 Centers	Edmonton	Calgary	Red Deer	Fort McMurray	Grande Prairie	Hinton**	Lethbridge	Medicine Hat
1980	$29,555	$ 27,512	$ 27,924	$ 28,553	$ 33,829	$ 30,684	-	$ 29,325	$ 29,061
1981	$31,529	$ 29,771	$ 29,958	$ 30,550	$ 35,905	$ 32,684	-	$ 30,837	$ 31,000
1982	$29,677	$ 27,720	$ 26,160	$ 29,604	$ 33,547	$ 29,185	$ 31,029	$ 30,012	$ 30,155
1983	$26,853	$ 25,127	$ 24,674	$ 25,994	$ 29,678	$ 27,899	$ 28,085	$ 26,370	$ 26,994

NOTES: * Expressed in nominal dollars.
** Hinton was not included in the 1980 and 1981 studies.

3.0 SUMMARY OF FINDINGS FOR THE WALK-UP APARTMENT

TABLE WA.8: Comparative Total Building Cost Graphs 1980-1983



3.0 SUMMARY OF FINDINGS FOR THE WALK-UP APARTMENT

TABLE WA.9: Trade Division Cost Summaries

Location	Edmonton	Calgary	Red Deer	Fort McMurray	Grande Prairie	Hinton	Lethbridge	Medicine Hat
Divisions								
1. Excavation	2,571	2,857	2,869	3,802	3,171	2,805	3,382	2,996
2. Concrete	15,170	14,729	16,914	21,440	19,259	17,071	16,188	17,753
3. Damproofing	611	601	796	850	853	651	730	730
4. Siding	12,876	12,534	12,782	17,122	16,589	16,806	15,549	15,833
5. Roofing	23,589	25,556	27,778	34,418	28,743	28,379	25,722	25,751
6. Carpentry - Rough	89,806	91,380	85,235	111,972	96,020	95,505	97,113	104,140
7. Carpentry - Finish	6,554	6,784	6,422	7,048	6,590	6,712	6,720	6,952
8. Windows and Glazing	20,796	19,716	21,941	25,786	22,510	22,265	22,301	22,301
9. Sealants	762	762	762	762	762	762	762	762
10. Doors	24,234	23,111	24,312	26,280	26,995	26,526	25,771	24,536
11. Hardware	2,923	2,923	2,923	2,970	2,970	2,970	2,947	2,947
12. Ceramic Tiling	4,110	3,699	4,151	4,521	3,781	5,480	4,247	4,384
SUB TOTAL	204,002	204,652	206,885	256,971	228,243	225,932	221,432	229,085

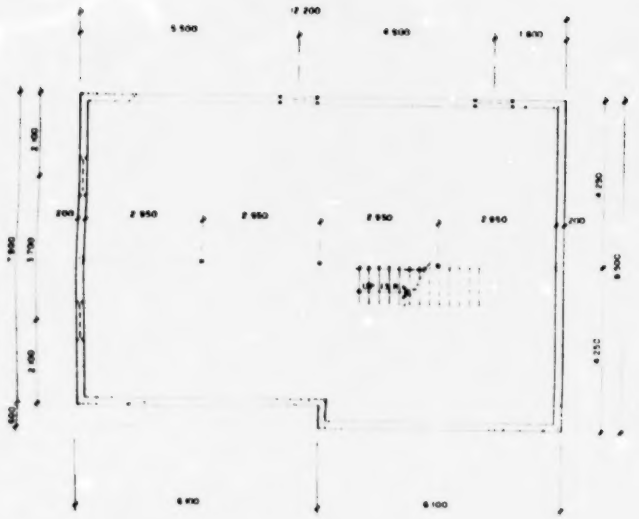
3.0 SUMMARY OF FINDINGS FOR THE WALK-UP APARTMENT

TABLE WA.9: Trade Division Cost Summaries (cont'd)

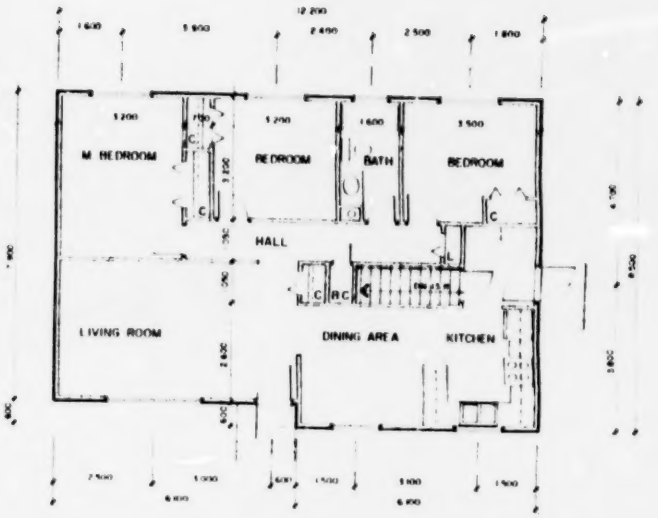
Location	Edmonton	Calgary	Red Deer	Fort McMurray	Grande Prairie	Hinton	Lethbridge	Medicine Hat
Divisions								
13. Wallboard	45,492	43,598	47,213	58,293	53,672	51,631	48,491	50,079
14. Flooring	43,721	41,865	46,930	50,760	46,186	47,107	48,328	48,516
15. Painting	18,285	17,145	20,125	21,837	20,461	21,964	21,608	22,306
16. Fittings	37,624	34,952	38,853	40,841	39,876	39,724	39,629	39,627
17. Specialties	15,698	15,698	15,842	15,720	15,720	15,720	15,712	15,712
18. Appliances	26,832	26,832	27,528	28,224	28,200	27,864	27,528	27,528
19. Plumbing	58,896	54,576	57,960	63,360	60,960	65,688	54,960	54,960
20. Heating	30,600	30,936	31,440	40,200	40,200	40,200	31,560	32,760
21. Ventilation	7,032	7,104	7,080	9,000	9,000	9,000	8,280	8,280
22. Fire Protection	2,064	2,016	2,076	2,616	2,616	2,616	2,064	2,064
23. Electrical	40,800	40,800	49,920	52,440	52,440	54,600	41,280	44,928
24. Site Overhead	48,000	48,000	48,000	48,000	48,000	48,000	48,000	48,000
SUBTOTALS - 1-24	579,046	568,174	599,852	688,262	645,574	650,046	608,872	623,845
25. Gnrl Cntrctr's Overh. & Profit	24,000	24,000	24,000	24,000	24,000	24,000	24,000	24,000
TOTAL	603,046	592,174	623,852	712,262	669,574	674,046	632,872	647,845

APPENDIX 'A'

Reduced Drawings Single-Detached Dwelling



BASEMENT / FOUNDATION PLAN

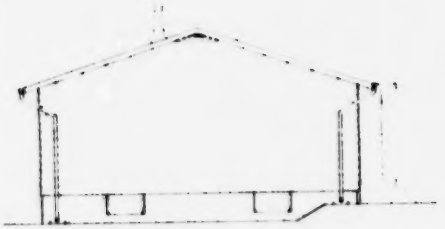


GROUND FLOOR PLAN

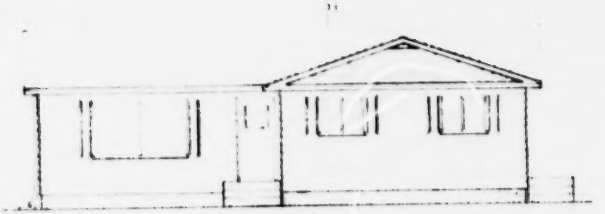
ALBERTA HOUSE COST COMPARISON STUDY

FLOOR PLANS

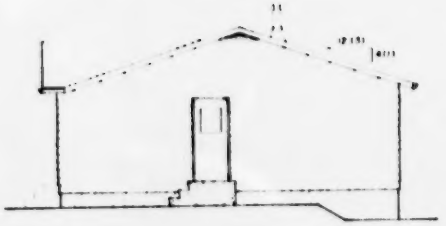
SCALE 1:50



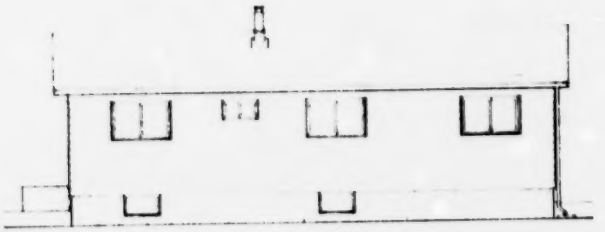
LEFT ELEVATION



FRONT ELEVATION



RIGHT ELEVATION

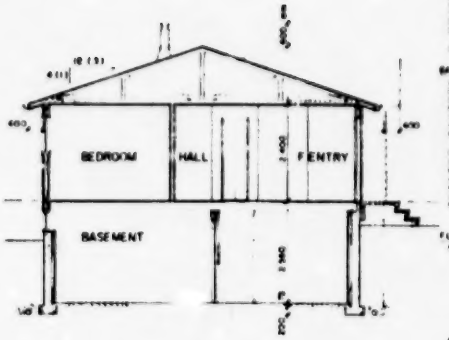


REAR ELEVATION

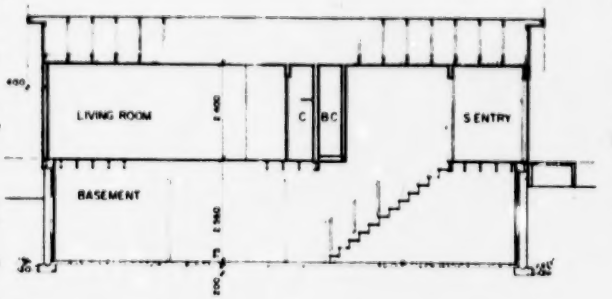
ALBERTA HOUSE COST COMPARISON STUDY

ELEVATIONS

SCALE 1:50



SECTION A



SECTION B

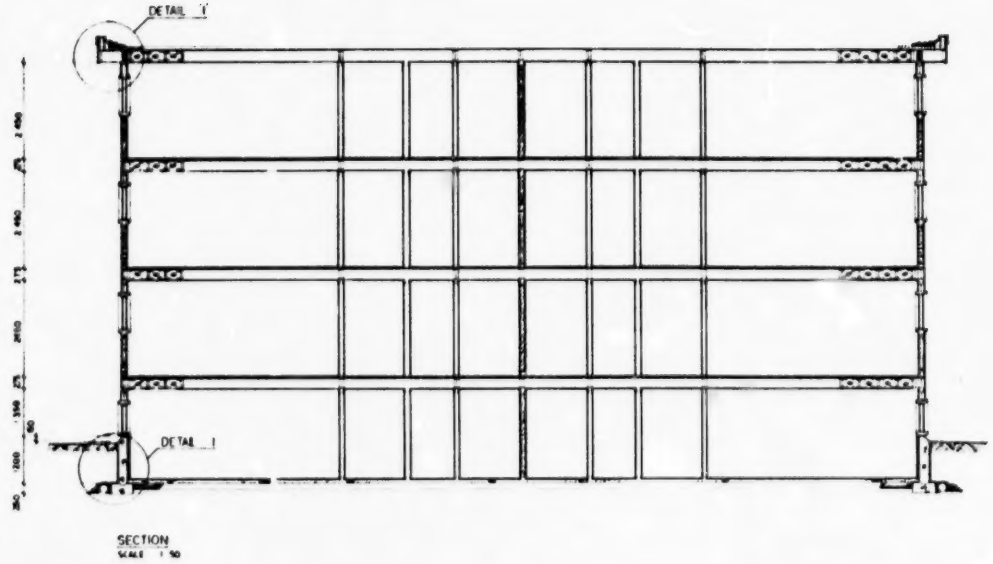
ALBERTA HOUSE COST COMPARISON STUDY

SECTIONS

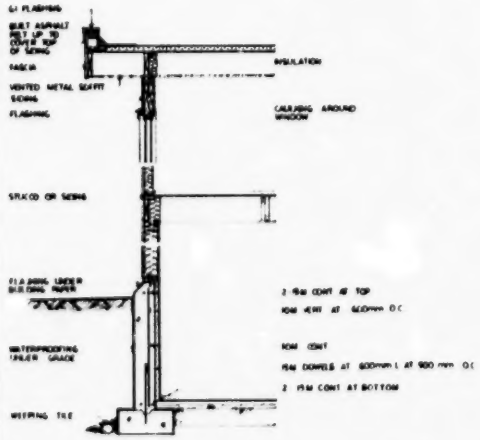
SCALE 1:50

APPENDIX 'B'

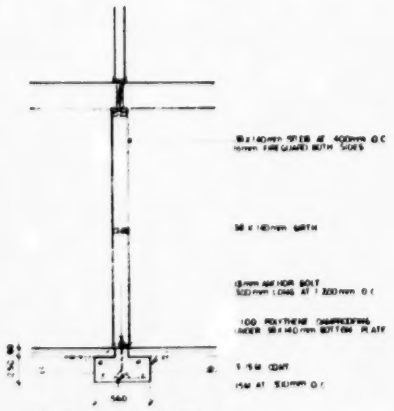
Reduced Drawings Walk-up Apartment



SECTION
SCALE 1:50



DETAIL 'A'
SCALE 1:20



TYPICAL INTERIOR SECTION
SCALE 1:20

Roof Construction Built-up Roof

- 38 mm rigid insulation
- 19 mm plywood sheathing
- 38 mm x 235 mm No. 1 fir or spruce rafters @ 600 mm on centre
- 38 x 184 mm strapping
- 15 mm fire guard both sides

Floor Construction

- 38 x 235 mm No. 1 fir or spruce joists
- 19 mm sub floor
- 6 mm underlay
- Floor Finish
- 13 mm Tentest 1/2 sheet goods
- sound batt
- 13 mm fire guard

Basement Floor Construction

- 89 mm concrete floor slab
- 6 mil mesh
- vapour barrier
- 150 mm compacted gravel fill

Exterior Wall Construction

- siding or stucco
- building paper
- 9 mm plywood sheathing
- mineral wool insulation
- 38 x 89 mm wood studs @ 600 mm on centre
- 38 x 140 mm wood studs for basement floor
- 13 mm gypsum board

Corridor and Dividing Wall Construction

- 38 x 89 mm wood studs @ 600 mm on centre - staggered
- mineral wool
- 6 mm wood board
- 13 mm fire guard both sides

Bearing Wall Construction

- 38 x 140 mm wood studs @ 600 mm on centre
- 13 mm fire guard both sides for all exterior bearing walls

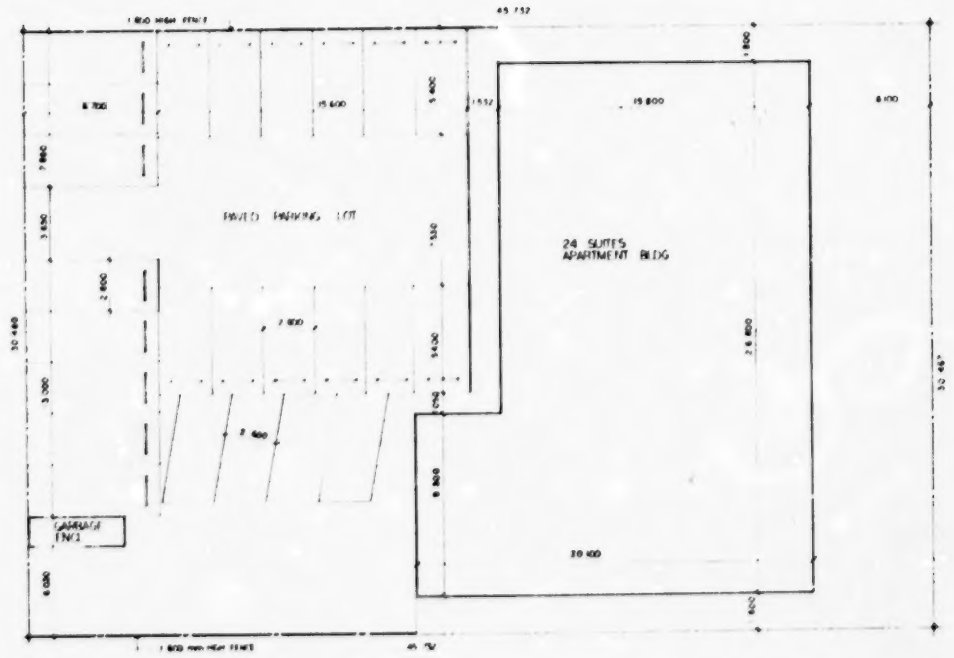
Ceiling Construction

- 16 mm fire guard

ALBERTA HOUSE COST COMPARISON STUDY

SECTION & DETAILS

SCALES - AS SHOWN



ALBERTA HOUSE COST COMPARISON STUDY

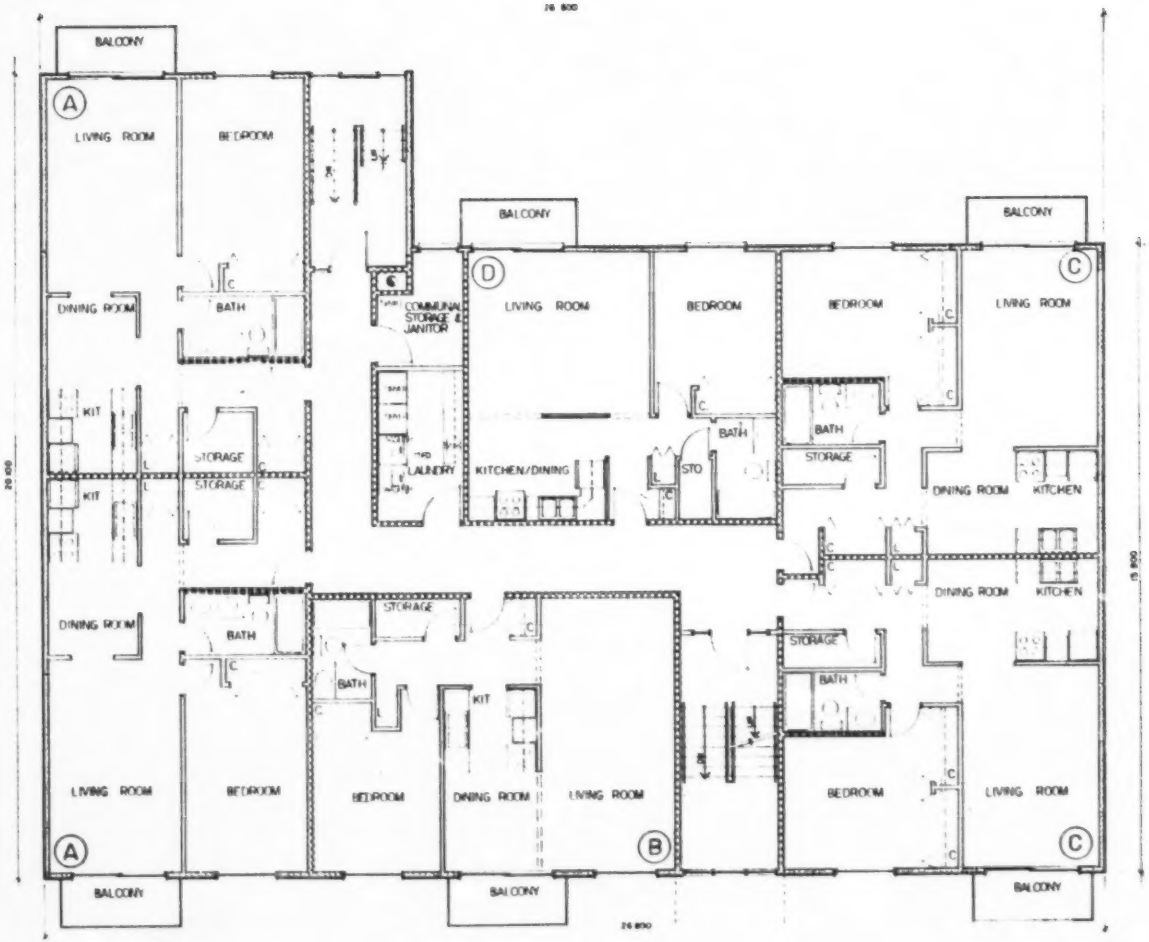
SITE PLAN

SCALE 1 : 100

ALBERTA HOUSE COST COMPARISON STUDY

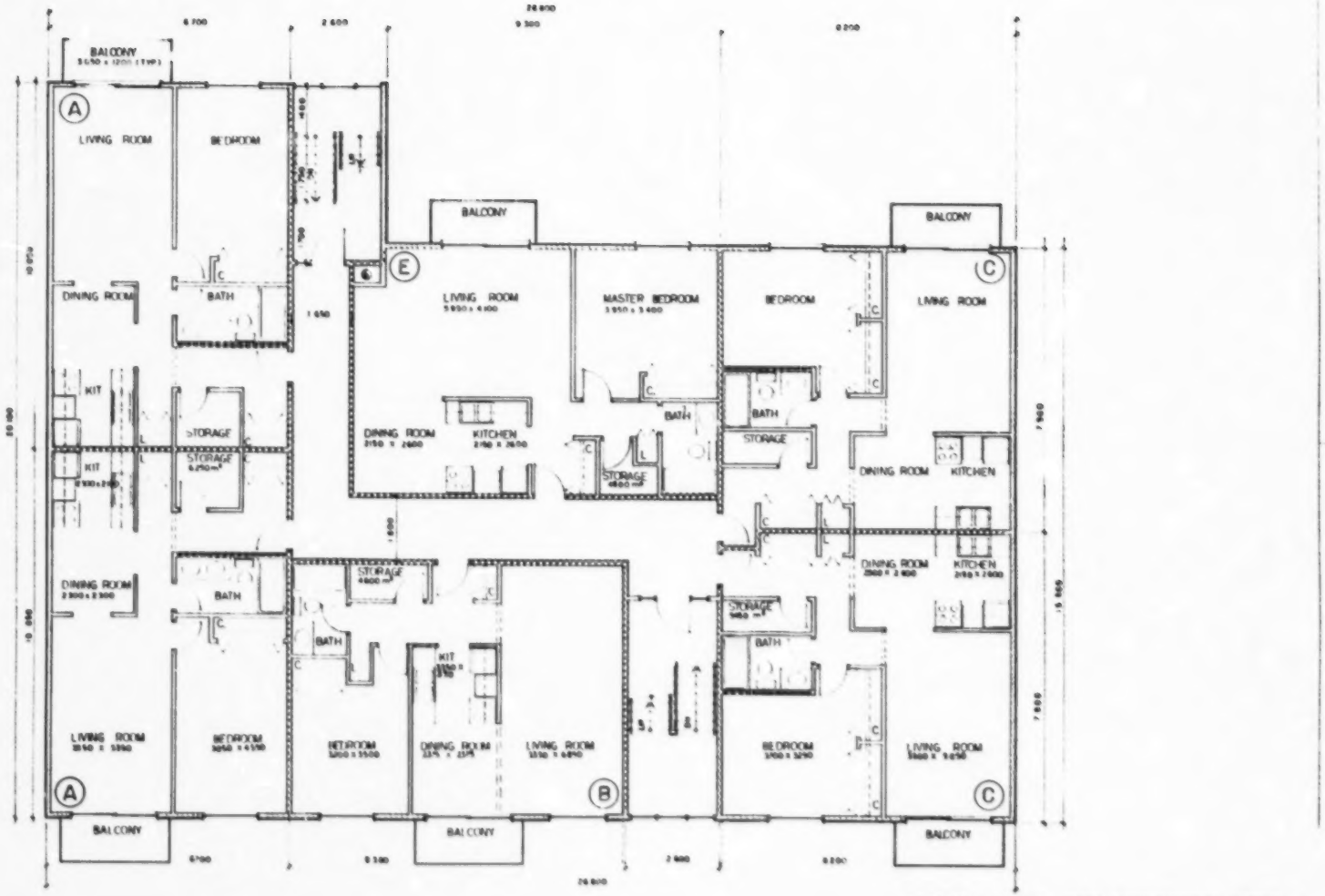
BASEMENT FLOOR PLAN

SCALE 1:50



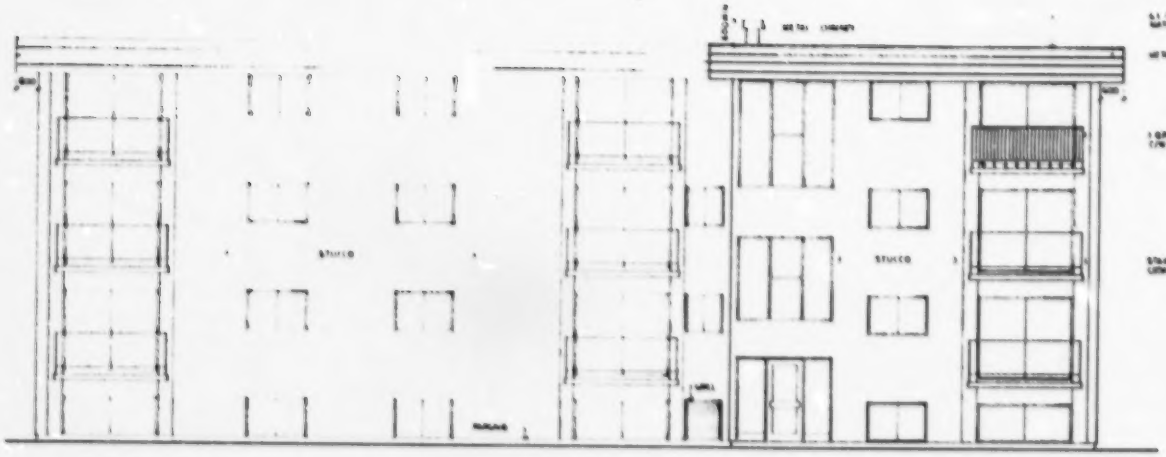
ALBERTA HOUSE COST COMPARISON STUDY

MAIN FLOOR PLAN

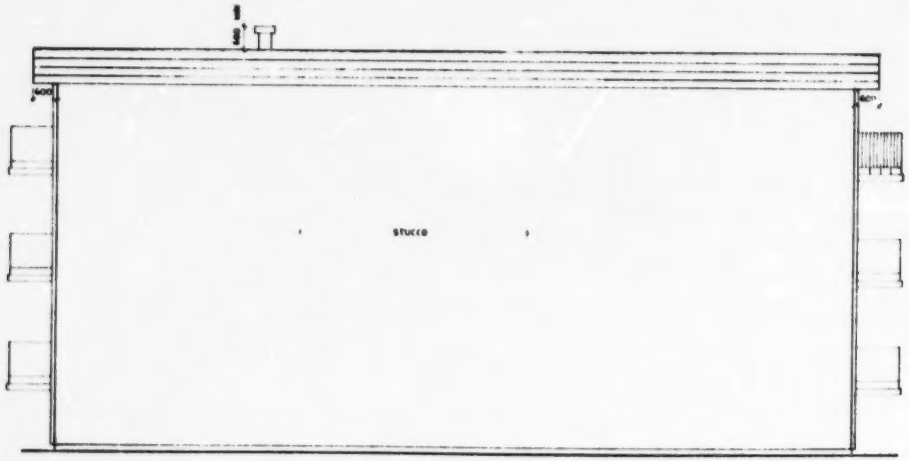


ALBERTA HOUSE COST COMPARISON STUDY

2ND & 3RD FLOOR PLAN



REAR ELEVATION

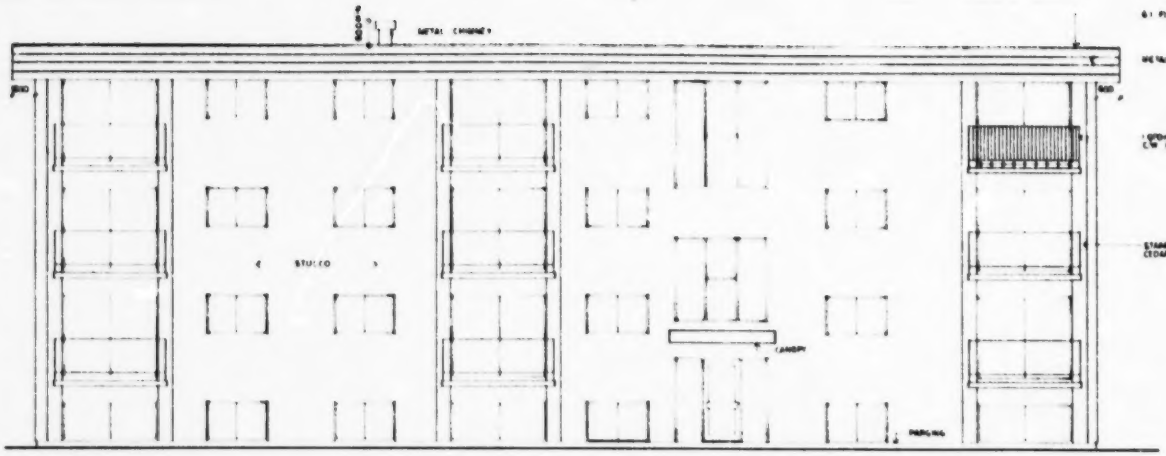


LEFT ELEVATION

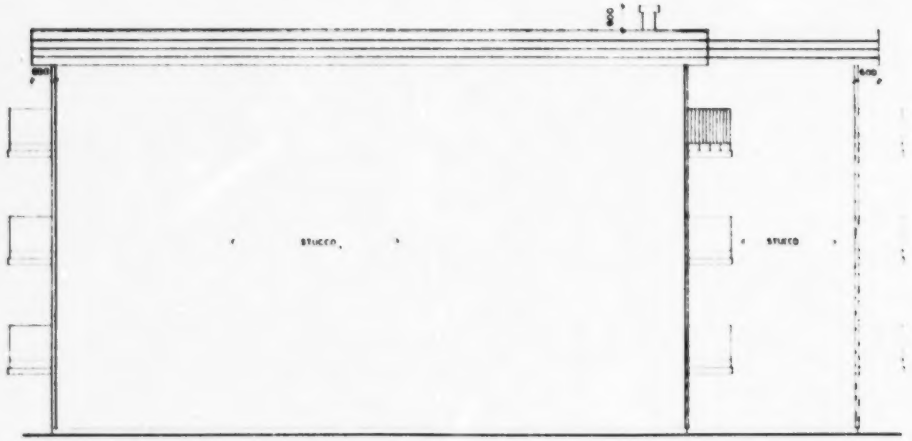
ALBERTA HOUSE COST COMPARISON STUDY

ELEVATIONS

SCALE 1:50



FRONT ELEVATION



RIGHT ELEVATION

ALBERTA HOUSE COST COMPARISON STUDY

APPENDIX 'C'

Changes from 1982 Study

SINGLE DETACHED DWELLING

This appendix notes changes made in the 1983 study as a result of updating, non-availability of materials or changes in standard materials used by the majority of home builders.

No.	Trade Div.	Item* No.(s)	Description
1	Concrete	2.40	Concrete 20.0 MPA in lieu of 17.5 MPA
2	Rough Carpentry	6.50 13.80	Batt insulation RSI 1.409 (R8) in lieu of RSI 1.057 (R6)
3	Windows and Glazing	8.10 thru 8.50	Windows and Glazing: Wood framed window with vinyl sliders in lieu of aluminium framed sliding units
4	Flooring	14.20	Carpet 20 oz. 100% nylon with 6mm (1/4") underlay in lieu of 70/30 Acrylic/Nylon
5	Appliances	18.10 18.20	Appliances: Same as 1982 but shown as an allowance - same cost for all eight centers
6	Electrical	21.10	Electrical - Lighting Fixture Material: Same as 1982 but shown as an allowance - same cost for all eight centers
7	Site Overhead	22.10	Site Overhead: Same as 1982 but shown as an allowance - same cost for all eight centers (see Trade Division Costs)

NOTES: *These item numbers refer to the detailed cost estimates in the trade divisions. See Section 4.0 in the report on the single-detached dwelling.

WALK-UP APARTMENT

This appendix notes changes made in the 1983 study, as a result of updating, non-availability of materials or changes in standard materials used by the majority of home builders.

No.	Trade Div.	Item * No. (s)	Description
1	Concrete	2.40	20.0 MPA concrete in lieu of 17.5 MPA
2	Windows and glazing	8.30 8.50	Windows: Wood frame with aluminium sliders in lieu of baked enamel frame
3	Doors	10.30	Metal folding bi-fold doors in lieu of mahogany faced
4	Flooring	14.20	Carpet. Weight of 20 oz. specified in the description for clarification
5	Appliances	18.20	Specified manual defrost to the refrigerator description
6	Electrical	23.10	New section added, which includes a $200 allowance for electrical fixtures
7	Site Overhead	24.00	Site Overhead - new division added (same amounts for all centres)
8	Overhead and Profit	25.00	Overhead and Profit - General Contractor's office overhead and profit - new division added (same amounts used for all centres)

NOTES: *These item numbers refer to the detailed cost estimates in the trade divisions. See Section 4.0 of the report on the walk-up apartment.

POOR

QUALITY

ORIGINAL